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**PEOPLE AGAINST NUCLEAR ENERGY V.
UNITED STATES NUCLEAR
REGULATORY COMMISSION:
POTENTIAL
PSYCHOLOGICAL HARM UNDER NEPA**

Over the course of time, man has made continuously increasing demands on the environment.¹ Growing concern over both protecting man and his limited natural resources and developing alternative sources of energy prompted Congress to enact legislation ensuring consideration of these competing interests.² The National Environmental Policy Act of 1969 (NEPA)³ and the Atomic Energy Act of 1954 (AEA)⁴ reflect this intent. NEPA, addressed generally to all federal agencies,⁵ requires environ-

1. See generally R. WALLACE, BIOLOGY, THE WORLD OF LIFE 524 (3d ed. 1981); E. KELLER, ENVIRONMENTAL GEOLOGY 3-4 (1976); S.L. UDALL, THE QUIET CRISIS (1963); Moncrief, *The Cultural Basis for Our Environmental Crisis*, 170 SCIENCE 508-12 (1970); White, *The Historical Roots of Our Ecological Crisis*, 155 SCIENCE 1203-07 (1967); Yi-Fu, *Our Treatment of the Environment in Ideal and Actuality*, 58 AM. SCI. 244-49 (1970).

2. Several statutes exhibit the legislature's commitment to protecting the environment from harm. See, e.g., Environmental Education Act, Pub. L. No. 91-516, 84 Stat. 1312 (codified at 20 U.S.C. § 1531 (1971)); Air Quality Act of 1967, Pub. L. No. 95-95, 91 Stat. 685 (codified as amended at 42 U.S.C. § 1857 (1976 & Supp. III 1979)); Environmental Quality Act of 1970, Pub. L. No. 91-224, 84 Stat. 114, (codified at 42 U.S.C. §§ 4371-4374 (1971)); Water Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91 (codified at 33 U.S.C. § 466 (1976)). The promulgating section of the National Environmental Policy Act of 1969 (NEPA), Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified at 42 U.S.C. § 4331 (1976 & Supp. III 1979)), states that

The Congress . . . recognizing further the critical importance of restoring and maintaining environmental quality to the *overall welfare and development of man*, declares that it is the continuing policy of the federal government to *foster and promote the general welfare, to create and maintain conditions under which man and nature can live in productive harmony* and fulfill the social, economic, and other requirements of present and future generations of Americans.

(emphasis added).

3. Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified at 42 U.S.C. §§ 4331-4361 (1976 & Supp. IV 1980)).

4. The original Atomic Energy Act of 1946, Pub. L. No. 79-585, 60 Stat. 755 (1946), dealt with military applications primarily because no civilian programs were in existence. The 1954 Act, technically an amendment to the 1946 Act, incorporated civilian uses of atomic energy. Pub. L. No. 83-703, 68 Stat. 919 (1954) (codified at 42 U.S.C. § 2011 (1976)).

5. See 42 U.S.C. § 4332(2) (1976) ("All agencies of the Federal Government shall . . ."); see also 42 U.S.C. § 4331(b) (1976). NEPA was applied to the Nuclear Regulatory Commission (NRC) in *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic*

mental impact statements (EIS)⁶ to be prepared where there are "major Federal actions significantly affecting the quality of the human environment."⁷ The AEA, directed specifically to the Nuclear Regulatory Commission (NRC),⁸ permits the issuance of an operating license only upon "reasonable assurance" that health and safety will be adequately protected.⁹

Passage of NEPA and AEA led to judicial participation in the realm of environmental protection.¹⁰ Courts intervened to interpret the purpose and scope of both NEPA and AEA when disputes arose over what impacts should be cognizable under each statute. No definitive test has emerged. Some courts have distinguished impacts on the basis of whether they have

Energy Comm'n, 449 F.2d 1109 (D.C. Cir. 1971) (action challenging the AEC rules promulgated to govern consideration of environmental matters).

6. An EIS is a detailed statement to be prepared by an agency involved in a significant federal action. The purpose of an EIS is to aid agencies in their decisionmaking process and advise other interested agencies and the public of the environmental consequences of a proposed federal action. The EIS must accompany the proposal throughout the review process, and copies must be made available to the President, the Council on Environmental Quality and the public. It must include environmental impacts, adverse effects, alternatives, long term versus short term gains, actual resources committed, and expert opinions where available from other agencies. 42 U.S.C. § 4332(2)(C) (1976); see *Calvert Cliffs' Coordinating Comm., Inc.*, 449 F.2d at 1114-18. A threshold determination of significance (i.e., a significant impact on the environment) must be made before an EIS is required. See *Hanly v. Mitchell*, 460 F.2d 640 (2d Cir.), *cert. denied*, 409 U.S. 990 (1972) (Hanly I); *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) (Hanly II).

7. 42 U.S.C. § 4332(2)(C) (1976). Congress vested the individual agencies with broad discretion to make a good faith determination of conduct significant enough to require an EIS. *Hanly II*, 471 F.2d at 828-30. See, e.g., *Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor*, 609 F.2d 342 (8th Cir. 1979) (establishment of job corps center related solely to socioeconomic conditions with no allegation that there would be significant impact on "human environment" as defined in NEPA; no EIS had to be prepared), *cert. denied*, 446 U.S. 936 (1980); *Maryland-National Capital Park & Planning Comm'n v. United States Postal Serv.*, 487 F.2d 1029, 1037 (D.C. Cir. 1973) (storm or oil runoff, traffic problems, and distinct changes in types of land use all trigger an EIS); *National Org. for the Reform of Marijuana Laws v. United States Dep't of State*, 452 F. Supp. 1226, 1232 (D.D.C. 1978) (department must prepare an EIS with respect to United States' participation in herbicide spraying of marijuana and poppy plants in Mexico because of potential health hazards associated with contaminated marijuana).

8. The Energy Recovery Act of 1974, Pub. L. No. 93-438, 88 Stat. 1233 (codified at 42 U.S.C. § 5814 (1976)) abolished the Atomic Energy Commission, and all functions of the Commission were transferred to and vested in the Nuclear Regulatory Commission and the Administrator of the Energy Research and Development Administration.

9. *Save Our Invaluable Land (SOIL), Inc. v. Needham*, 542 F.2d 539, 543 (10th Cir. 1976), *cert. denied*, 430 U.S. 945 (1977). All nuclear facilities must be granted an operating license by the NRC prior to commencing operation. See 42 U.S.C. § 2133(d) (1976). See also *People Against Nuclear Energy (PANE) v. United States Nuclear Regulatory Comm'n*, 678 F.2d 222 (D.C. Cir. 1982).

10. See *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n*, 449 F.2d at 1109, 1111.

a primary or secondary effect on the environment¹¹ while others have classified impacts based on their quantifiability or objectivity.¹² Applying the traditional definition of health and safety, courts have included physical harms to human health and the environment within the protection of NEPA and AEA, but have excluded any allegations of psychological harm.¹³ In *People Against Nuclear Energy (PANE) v. United States Nuclear Regulatory Commission*,¹⁴ the United States Court of Appeals for the District of Columbia Circuit upheld the narrow construction of AEA, but potentially broadened the scope of NEPA by recognizing psychological harm as an impact.

On March 28, 1979, mechanical malfunctions inside Three Mile Island nuclear power reactor unit No. 2 (TMI-2) at the electric generating station of Metropolitan Edison Company were compounded by operators' errors in attempting to correct those malfunctions. The resulting accident created the possibility of release of radioactive materials, potential core meltdown, and danger of a hydrogen explosion.¹⁵ Shortly after the accident at TMI-2, the NRC ordered unit No. 1 (TMI-1) to remain in cold shutdown¹⁶ pending an investigation of the reactor's safety.¹⁷ PANE and others intervened in the restart proceedings,¹⁸ requesting the NRC to consider psycho-

11. See *infra* notes 41-58 and accompanying text.

12. See *infra* notes 59-87 and accompanying text.

13. See, e.g., *Power Reactor Dev. Co. v. International Union of Elec. Workers*, 367 U.S. 396 (1961); *First Nat'l Bank v. Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973) ("As regards public 'sensibilities' . . . we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized."); *New Hampshire v. Atomic Energy Comm'n*, 406 F.2d 170 (1st Cir.), *cert. denied*, 395 U.S. 962 (1969); *Monarch Chem. Works, Inc. v. Exon*, 466 F. Supp. 639, 657 (D. Neb. 1979) ("NEPA does not require an evaluation of the psychological and sociological effects of a prison on people who live nearby."); *Trinity Episcopal School Corp. v. Romney*, 387 F. Supp. 1044, 1078-79 (S.D.N.Y. 1974) ("[C]ommunity attitudes and fears, or the propensity of certain economic or racial groups to commit anti-social behavior . . . are not required in a NEPA study."), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

14. 678 F.2d 222 (D.C. Cir. 1982) *cert. granted sub nom. Metropolitan Edison Co. v. PANE*, 103 S. Ct. 292 (1982). Oral argument was heard March 1, 1983.

15. See *The Wash. Post*, Mar. 30, 1979 at A1, col. 2 and at A2, col. 1; *TIME*, Apr. 9, 1979, at 8.

16. At the time of the accident, TMI-1, the other nearly identical reactor on the same site, was shut down for scheduled maintenance and refueling. The NRC ordered TMI-1 to remain in shutdown even though it was undamaged by the accident. *PANE*, 678 F.2d at 223.

17. *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1)*, 10 N.R.C. 141, 148 (1979).

18. For a description of the restart proceedings, see *infra* notes 99-103 and accompanying text.

logical stress and community stability factors¹⁹ before deciding whether to restart TMI-1.²⁰ The NRC declined to consider either.²¹ It concluded that the undamaged reactor could be restarted without preparation of a supplemental EIS²² considering these issues. PANE filed a petition directly to the United States Court of Appeals for the District of Columbia Circuit to challenge this decision.²³

The divided opinion of the court of appeals reflects the controversial nature of its decision. A three judge panel decided the NEPA and AEA questions separately. Judge Wright's opinion, with the concurrence of Senior Judge McGowan, became the opinion of the court on the NEPA question. He held that psychological stress is cognizable under NEPA because "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe" have an impact on the health of human beings.²⁴ Any federal action that might have a significant affect on health, including psychological health, triggers the preparation of an EIS. On the NEPA issue, the court remanded the record to the NRC to make a threshold determination of whether the changed circumstances at TMI required preparation of a supplemental EIS.²⁵

Judge Wilkey's dissent on the NEPA issue excluded psychological harm from the definition of health. He argued that fear, like esthetics, is an individual matter, and the majority's analysis sets no consistent standard to

19. PANE contended that restart of TMI-1 would "damage the stability, cohesiveness, and well-being of the neighboring communities because it would perpetuate loss of citizen confidence in community institutions and would discourage economic growth." *PANE*, 678 F.2d at 224.

20. The commission had limited the scope of its investigation to technical, managerial and operational evaluations. *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1)*, 10 N.R.C. 141 (1979).

21. *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1)*, 12 N.R.C. 607 (1980). Only four of the five commissioners voted. The split decision effectively rejected the Licensing Board's recommendation that, under NEPA, psychological distress and community stability should be considered. The Licensing Board then continued its hearings and determined that the preparation of an EIS was unnecessary. See *infra* notes 99-102 and accompanying text. This Note focuses solely on the psychological impact issue although the court does discuss the community stability allegation.

22. For discussion of when a supplemental EIS is required and what it must include, see 40 C.F.R. § 1502.9(c)(1) (1981); see also *PANE*, 678 F.2d at 233.

23. PANE contended that under NEPA and AEA the NRC had to consider "potential harms to psychological health and community well-being." *PANE*, 678 F.2d at 223.

24. *Id.* at 230.

25. *Id.* at 226. The agency in charge of the proposed action is responsible for making the threshold determination of whether an action significantly affects the quality of the human environment so as to require an EIS. 42 U.S.C. § 4332(2)(C) (1976). See *Hanly v. Kleindienst (Hanly II)*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973); *Monarch Chem. Works, Inc. v. Exon*, 466 F. Supp. 639 (D. Neb. 1979).

determine when a fear is "real and justifiable."²⁶ Judge Wilkey claimed that the majority's decision will put the NRC in the position of analyzing not only risks but how people perceive those risks.²⁷ Ultimately, he maintained, the decision would expose every agency, not just the NRC, to charges of potential psychological harm. The result would be that virtually any allegation of fear effectively could prevent any federal action until an EIS is prepared.²⁸

While finding psychological health to be within the parameters of NEPA, the court did not find it to be within the definition of health under AEA.²⁹ Judge Wilkey, joined by Judge McGowan, formed the majority on the AEA question. Judge Wilkey's opinion relied primarily on legislative history. He reasoned that the narrow focus of the AEA reflected Congress's intent to limit the construction of "health and safety" strictly to the special hazards presented by radioactivity.³⁰ Since post-traumatic psychological stress can result from any traumatic event, it is not a special hazard contemplated by AEA.³¹

This Note will evaluate the *PANE* decision by comparing it with the legislative intent manifest in NEPA and the prior judicial decisions interpreting NEPA. The court's controversial decision to treat psychological harm as cognizable under NEPA sets precedent in an area of first impression and expands the scope of the Act. Analyzing the significant potential effects of this decision, this Note concludes that the *PANE* Court properly interpreted the scope of NEPA and that its decision will enhance NEPA's goal of encouraging beneficial uses of our environment by informing and educating agency decisionmakers and the public.

I. NEPA POLICIES AND GOALS

By enacting NEPA, Congress intended to establish a comprehensive federal policy of protecting both man and the natural environment.³² In

26. 678 F.2d at 242 (Wilkey, J., dissenting).

27. *Id.* at 242.

28. Judge Wilkey condemned the court's prerequisites to NEPA consideration of psychological harm as unjustified. He questioned whether susceptibility to psychological stress could be engendered only in "post-traumatic" events. *Id.* at 241-44 (Wilkey, J., dissenting).

29. *Id.* at 254.

30. *Id.* at 255-56 (citing H.R. REP. NO. 2181, 83d Cong., 2d Sess. 3 (1954); S. REP. NO. 1699, 83d Cong., 2d Sess. 3 (1954); S. REP. NO. 1211, 79th Cong., 2d Sess. 1335 (1946); H.R. REP. NO. 2478, 79th Cong., 2d Sess. 8 (1946)).

31. 678 F.2d at 252.

32. 42 U.S.C. § 4331(a) (1976 & Supp. III 1979). *See supra* note 2. *See also* H. REP. NO. 378, 91st Cong., 1st Sess., *reprinted in* 1969 U.S. CODE CONG. & AD. NEWS 2751; S. REP. NO. 52, 94th Cong., 1st Sess., *reprinted in* 1975 U.S. CODE CONG. & AD. NEWS 859. *See infra* notes 115-16 and accompanying text.

the promulgating section of the statute, Congress manifested its desire to encourage beneficial uses of resources without creating adverse impacts that outweigh the advantages of the proposed action.³³ The procedural section also reflects this intent to protect the interest of society in the federal decisionmaking process by weighing competing factors. When an EIS is triggered, the decisionmaker's analysis resembles a cost-benefit analysis.³⁴ Federal agencies conducting such an analysis must pursue an interdisciplinary approach implementing innovative methods and procedures designed to permit consideration of a variety of factors.³⁵ Title II of the Act created the Council on Environmental Quality (CEQ), a separate agency designed exclusively to aid regulatory agencies in interpreting and fulfilling the requirements of NEPA.³⁶

NEPA differs significantly in scope from AEA. Under NEPA the responsibilities are broad and general and are directed to all federal agencies.³⁷ Congress more narrowly defined both the purpose of AEA and the specific agency responsible for its implementation.³⁸ Consequently, relatively little dispute has arisen over the legislative intent of the AEA, while

33. 42 U.S.C. § 4331(b)(3) (1976).

34. 42 U.S.C. § 4332(2)(C) (1976 & Supp. III 1979). See *supra* notes 6-7 and accompanying text for a discussion of an EIS.

35. Agencies must consider "presently unquantified environmental amenities and values" as well as "economic and technical considerations." 42 U.S.C. § 4332(2)(B) (1976).

36. 42 U.S.C. §§ 4341-4347 (1976 & Supp. III 1979). The CEQ is a watchdog agency with no regulatory authority. See S. REP. NO. 296, 91st Cong., 1st Sess. 18 (1969); H.R. REP. NO. 765, 91st Cong., 1st Sess. 8 (1969). It functions as a research, resource and advisory body to NEPA. *Greene County Planning Bd. v. Federal Power Comm'n*, 455 F.2d 412 (2d Cir.), *cert. denied*, 409 U.S. 849 (1972). The CEQ Guidelines reinforce the broad scope of NEPA and lend support to a liberal interpretation of impacts cognizable under NEPA. For example, the guidelines suggest that an EIS should accompany any proposed actions where the environmental impact is likely to be controversial. Guidelines § 5(b), 36 Fed. Reg. 7724 (1971). The CEQ regulations, 40 C.F.R. § 1500 (1981), establish a uniform procedure for implementing NEPA designed to eliminate inconsistent agency interpretations. 43 Fed. Reg. 55,978 (1978). These regulations were issued pursuant to Exec. Order 11991 (1977), 3 C.F.R. § 124 (1978) and have been given "substantial deference" as an interpretation of NEPA. *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979). The *PANE* majority considers these regulations binding. *PANE*, 678 F.2d at 231.

37. See 42 U.S.C. § 4332 (1976).

38. 42 U.S.C. § 2201 (1976 & Supp. 1980). See, e.g., 42 U.S.C. § 2201(b) (1976) providing that:

In the performance of its functions the *Commission* is authorized to—

(b) establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material, as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property.

(emphasis added).

NEPA's "opaque" and "woefully ambiguous"³⁹ language has contributed to differing judicial interpretations of its scope.⁴⁰ Efforts of the courts to define the impacts Congress intended NEPA to encompass have produced no definitive test, and agencies have been left to derive their own standards from a wealth of disparate judicial opinions. Until *PANE*, however, no court had ruled on the cognizability of psychological effects.

II. PRIOR JUDICIAL INTERPRETATIONS OF NEPA

A. *Injury to Health and Natural Resources Distinguished from Secondary Sociological and Economic Impacts*

In *Maryland-National Capitol Park & Planning Commission v. United States Postal Service*,⁴¹ the United States Court of Appeals for the District of Columbia Circuit laid the foundation for distinctions between the types of harms cognizable under NEPA. The Commission brought suit to enjoin further construction of a bulk mail center on the grounds that the Postal Service failed to file an EIS. Before remanding the case, the court discussed several potential impacts including: inadequate protection from storm-water and oil run-offs damaging river ecology and creating health hazards; economic repercussions resulting from the influx of low income workers; visual and esthetic detriment caused by building parking and loading facilities adjacent to the highway; and increased traffic and pollution created by the complex's location.⁴² Judge Leventhal, writing for the majority, noted that "genuine issues as to health"⁴³ and impacts having an affect on the "quality of the human environment"⁴⁴ trigger preparation of an EIS, while fears of a social or economic nature do not.⁴⁵ Congress never intended NEPA to incorporate social opinion, economic concerns or other equally diverse matters of individual taste.⁴⁶

39. *City of New York v. United States*, 337 F. Supp. 150, 159 (E.D.N.Y. 1972) (Friendly, C.J.); see also Voight, *The National Environmental Policy Act and the Independent Regulatory Agency*, 5 NATURAL RESOURCES LAW. 13 (1972).

40. See, e.g., *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F. Supp. 908 (D. Or. 1977) (a broad interpretation of the scope and contents of an EIS). But see *First Nat'l Bank v. Richardson*, 484 F.2d 1369, 1377 (7th Cir. 1973) (construing the requirements of an EIS more narrowly).

41. 487 F.2d 1029 (D.C. Cir. 1973)

42. *Id.* at 1033.

43. *Id.* at 1039-40.

44. *Id.* at 1038. See 42 U.S.C. § 4331(b)(2) (1976).

45. *Maryland-Nat'l*, 487 F.2d at 1037. See *Groton v. Laird*, 353 F. Supp. 344 (D. Conn. 1972).

46. Using esthetics as an example, the court explained that, although NEPA requires consideration of esthetics generally, (42 U.S.C. § 4331(b)(2) (1976)), every decision has some esthetic element involved, but not every decision falls within the purview of NEPA. Only

Five years later, in *Image of Greater San Antonio v. Brown*,⁴⁷ the United States Court of Appeals for the Fifth Circuit reiterated the socioeconomic distinction made in *Maryland-National* and its progeny.⁴⁸ The plaintiffs challenged an Air Force decision to eliminate jobs at a San Antonio air base arguing that the Air Force should prepare an EIS evaluating the socioeconomic effects of its decision on the surrounding community. The court held that only federal actions having a direct impact on "natural" environmental resources⁴⁹ could trigger preparation of an EIS. It listed technological advances, industrial expansion, resource exploitation, and urban development as the types of activities which NEPA contemplated as affecting the natural environment.⁵⁰ Once an EIS has been triggered by a primary impact, the court found that secondary socioeconomic impacts may also be considered.⁵¹ Purely economic decisions with potential psychological and sociological impacts fall within that category.

Other courts, although focusing on the distinction between primary and secondary impacts, emphasized the effect of the action on the surrounding community rather than the nature of the action. In *Como-Falcon Community Coalition, Inc. v. United States Department of Labor*,⁵² the United States Court of Appeals for the Eighth Circuit found that the Department of Labor's establishment of a Job Corps center on an existing site had no primary impact on the human environment,⁵³ and thus an EIS was not required. Allegations of vehicular and pedestrian congestion, impacts on local utilities, commerce and social services, contributions to criminal activity, and alteration of the character of the neighborhood resulting from

psychological or esthetic factors having a direct impact on the human environment will be cognizable. 487 F.2d at 1038. See also *National Resources Defense Council v. Morton*, 458 F.2d 827 (D.C. Cir. 1972).

47. 570 F.2d 517 (5th Cir. 1978).

48. *Breckinridge v. Rumsfeld*, 537 F.2d 864 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061 (1977); *Metlakatla Indian Community v. Adams*, 427 F. Supp. 871 (D.D.C. 1977); *National Ass'n of Gov't Employees v. Rumsfeld*, 418 F. Supp. 1302 (E.D. Pa. 1976); *National Ass'n of Gov't Employees v. Rumsfeld*, 413 F. Supp. 1224 (D.D.C. 1976), *aff'd sub nom. National Ass'n of Gov't Employees v. Brown*, 556 F.2d 76 (D.C. Cir. 1977).

49. 42 U.S.C. § 4331 (1976 & Supp. III 1979).

50. *Brown*, 570 F.2d at 522.

51. *Id.* See *Hanly I*, 460 F.2d at 640; Council on Environmental Quality Guidelines, 40 C.F.R. § 1500.8(a)(3)(ii) (1975). But see *McDonald v. Schlesinger*, 404 F. Supp. 221 (W.D. Mo. 1975). Primary impacts are those which directly affect the "human environment." See *infra* note 53. Secondary impacts refer to indirect effects such as socioeconomic ramifications.

52. 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980).

53. The CEQ regulations define human environment as "the natural and physical environment and the relationship of people with that environment." 40 C.F.R. § 1508.04 (1981).

an influx of low income participants were insufficient to trigger an EIS.⁵⁴ The court dismissed all of these impacts as socioeconomic complaints not cognizable under NEPA unless accompanied by a primary impact.⁵⁵

In *Monarch Chemical Works, Inc. v. Exon*,⁵⁶ the United States District Court for the District of Nebraska expressly included psychological effects in the category of secondary socioeconomic effects not cognizable under NEPA. Rejecting an expansive interpretation of NEPA, the *Monarch* court refused to evaluate potential psychological and sociological impacts of a prison on the surrounding community.⁵⁷ The court emphasized that these impacts are indirect and implied that a decision recognizing them would encourage "creative litigation." The court also reasoned that the environmental protection to be gained by preparation of an EIS based on these factors would be proportionately much less than the time consumed in its preparation.⁵⁸

B. Quantifiability Raised As a Bar to Cognizability

As plaintiffs began challenging federal actions that would allegedly harm psychological health, some courts, like the *Monarch* Court, merely broadened the category of secondary impacts to include psychological effects. Other courts, however, employed alternate analyses designed to dismiss psychological stress from consideration altogether.

The psychological and sociological effects of a proposed jail near residential dwellings were issues raised in the United States Court of Appeals for the Second Circuit seven years prior to the *Monarch* decision. In *Hanly v. Kleindienst*,⁵⁹ the court found that citizens' psychological distaste over having a jail nearby could not be considered under NEPA. Unlike *Monarch's* secondary impact analysis, however, the court based its decision on the theory that these types of factors do not lend themselves to measurement.⁶⁰ Elaborating on this distinction, the court noted that while crime or noise levels can be quantified, psychological factors have no concrete

54. *Como-Falcon*, 609 F.2d at 345-46 (citing *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976)).

55. *Como-Falcon*, 609 F.2d at 345 (citing *Image of Greater San Antonio v. Brown*, 570 F.2d 517, 522 (5th Cir. 1978)).

56. 466 F. Supp. 639, 643 (D. Neb. 1979).

57. *Id.* at 658.

58. *Id.*

59. *Hanly II*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973). *Hanly II* involved a NEPA study of the proposed construction of a jail as part of the Court House Annex being built in the Foley Square neighborhood. The case was remanded twice by the court of appeals. See *Hanly I*, 460 F.2d 640 (2d Cir.), *cert. denied*, 409 U.S. 990 (1972).

60. *Hanly II*, 471 F.2d at 833.

means of appraisal.⁶¹ The majority opinion stressed the importance of being able to determine "absolute quantitative adverse environmental effects" as one of the factors relevant to the agency's threshold review of any proposed action.⁶²

In a dissenting opinion, Judge Friendly relied on the language of NEPA, the purpose of an EIS, and the CEQ guidelines to conclude that psychological stress should be cognizable. NEPA directs that "presently unquantified environmental amenities and values . . . be given appropriate consideration in decision making along with economic and technical considerations."⁶³ According to Judge Friendly, an EIS must include all relevant data if it is to fulfill its purpose of ensuring that agencies will make informed decisions before committing federal resources.⁶⁴ Finally, he directed attention to the broad CEQ interpretation of NEPA's duties.⁶⁵ The court rejected Judge Friendly's opinion, not on the merits of his argument, but because it found practical problems with implementing such a vague standard.⁶⁶

The Second Circuit's concern, expressed in *Hanly II*, over the inability to quantify psychological and sociological harm apparently was not shared by the Seventh Circuit in deciding *Chelsea Neighborhood Association v. United States Postal Service*.⁶⁷ Under *Chelsea*, agencies must consider both physical and social science data when making NEPA decisions.⁶⁸ Using that data, the court found that emotional and physical isolation of people in high rise apartments must be considered in an EIS. The court

61. Unlike noise which can be measured in decibels and even crime levels which can be calculated through the use of crime statistics, psychological factors are not readily quantified. *Id.* at 833 n.10.

62. *Id.* at 836.

63. *Id.* at 839 (Friendly, J., dissenting) (quoting 42 U.S.C. § 4332(2)(B) (1970)).

64. *Hanly II*, 471 F.2d at 837-38.

65. *Id.* The CEQ recommends providing an EIS in all controversial decisions. See *supra* note 36 and accompanying text.

66. The majority attempted to impose an objective standard to determine when an EIS would be required. The relevant factors to be considered by an agency making a threshold determination were:

(1) the extent to which the action will cause adverse environmental effects in excess of those created by existing uses in the area affected by it, and (2) the absolute quantitative adverse environmental effects of the action itself, including the cumulative harm that results from its contribution to existing adverse conditions or uses in the affected area.

Hanly II, 471 F.2d at 830-31.

67. 516 F.2d 378 (7th Cir. 1973) (implicitly adopting Judge Friendly's dissent from *Hanly II*, 471 F.2d at 836).

68. *Chelsea Neighborhood Ass'n*, 516 F.2d at 388. See also 42 U.S.C. § 4332(2)(a) (1976 & Supp. III 1979); 40 C.F.R. §§ 1502.6, 1507.2 (1981); S. REP. No. 296, 91st Cong., 1st Sess. 8 (1969).

never considered whether such factors were quantifiable; it simply asserted that they must be evaluated. *Chelsea*, however, appears to be an anomaly implicitly rejected by later NEPA decisions in other circuits.⁶⁹

In an attempt to escape the problems of quantification, the Eighth and Ninth Circuits held that mathematical precision may not be necessary under NEPA. In *Robinson v. Knebel*,⁷⁰ the United States Court of Appeals for the Eighth Circuit recognized that environmental factors are frequently not amenable to quantification. Land owners challenged the condemnation of their property for inclusion in a recreational development. The court found that the plaintiffs received a fair cost-benefit analysis without assigning precise dollar values to every environmental consideration. The court suggested that, if the EIS "otherwise recognizes, discusses, and weighs the favorable and adverse effects of agency action,"⁷¹ absolute quantification may not be necessary. In *Trout Unlimited v. Morton*,⁷² the United States Court of Appeals for the Ninth Circuit, in refusing to enjoin construction of a dam, also found a formal, mathematical cost-benefit analysis unnecessary. The court recognized the need to weigh the advantages and disadvantages of every proposal and to compare the results with a similar analysis of alternatives. It found that broad inclusion of information is crucial in making informed decisions, serves to educate the public on the proposed project, and "encourages public participation in the development of that information."⁷³ Accordingly, information, whether susceptible to mathematical representation or not, must be included in an EIS.⁷⁴

C. Subjective v. Objective Impacts

The post-*Hanly* decisions significantly weaken arguments which attempt to reject consideration of impacts based on lack of quantifiability. Still searching for valid objections to the inclusion of psychological stress

69. See, e.g., *Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Monarch Chem. Works, Inc. v. Exon*, 466 F. Supp. 639, 658 (D. Neb. 1979); *Trinity Episcopal School Corp. v. Romney*, 387 F. Supp. 1044 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

70. 550 F.2d 422 (8th Cir. 1977).

71. *Id.* at 426.

72. 509 F.2d 1276 (9th Cir. 1974).

73. *Id.* at 1283. See also *Jones v. District of Columbia Redevelopment Land Agency*, 499 F.2d 502, 521 (D.C. Cir. 1974), *cert. denied*, 423 U.S. 937 (1975).

74. In accordance with the court's logic, see 40 C.F.R. § 1500.8(a)(4)(1976). "In each case, the analysis should be sufficiently detailed to reveal the agency's comparative evaluation of the environmental benefits, costs and risks of the proposed action and each reasonable alternative." See generally Comment, *Judicial Review of Cost-Benefit Analysis under NEPA*, 53 NEB. L. REV. 540 (1974); Note, *Cost-Benefit Analysis in the Courts: Judicial Review under NEPA*, 9 GA. L. REV. 417 (1975).

within NEPA, courts began to question whether such factors were too subjective to permit meaningful analysis. In *First National Bank v. Richardson*,⁷⁵ the United States Court of Appeals for the Seventh Circuit applied an objective fact approach, dismissing both the quantifiability and secondary socioeconomic arguments as problematic. The court held that the General Services Administration (GSA) had sufficiently evaluated the potential impacts of building a parking garage and detention center in an inner city area. When making its study, the GSA considered information on construction, conformity to building codes, adequacy and availability of utilities and waste disposal facilities, increased traffic, security precautions, and feasibility of alternative sites. Noting that inner city environmental impacts often interact with socioeconomic conditions, the court indicated that attempts to separate and label problems would be futile.⁷⁶ Instead, it suggested broadening the traditional definition of environmental impacts to include concerns unique to inner city life.

The *First National Bank* court relegated discussion of psychological impacts to a footnote and disposed of the issue summarily. Citing *Hanly II*⁷⁷ for the proposition that "public sensibilities" to the building of prisons in residential areas "do not lend themselves to measurement," the court determined that, even if amenable to quantification, such sensibilities are not properly cognizable under NEPA.⁷⁸ To be cognizable, an allegation must present clear and convincing evidence of danger to public safety.⁷⁹ Fear of harm alone is insufficient; the safety of the community must in fact be in jeopardy.

Two years later, the Seventh Circuit again emphasized the need for objective facts rather than mere subjective fears of potential harm before an impact becomes cognizable under NEPA. In *Nucleus of Chicago Homeowners Association v. Lynn*,⁸⁰ the court refused to enjoin the building of low income housing until the United States Department of Housing and Urban Development could prepare an EIS to take into account neighborhood fears of the prospective tenants. Quoting *Maryland-National* for the

75. 484 F.2d 1369 (7th Cir. 1973).

76. *Id.* at 1377 (quoting 2 COUNCIL ON ENVTL. QUAL. ANN. REP. 1189-91 (Aug. 1971)). "Life in the inner city embraces a range of environmental problems, some starkly evident, some disguised, some acknowledged as environmental, some wearing other labels. . . . [In the inner city] many of our most severe environmental problems interact with social and economic conditions which the Nation is also seeking to improve."

77. 471 F.2d at 833.

78. *First Nat'l Bank of Chicago*, 484 F.2d at 1380 n.13 (quoting *Hanly II*, 471 F.2d at 833).

79. 484 F.2d at 1380 n.13.

80. 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976).

proposition that "concerned persons might fashion a claim supported by linguistics and etymology,"⁸¹ the Seventh Circuit stressed the need for tangible evidence of potential harm.

The *Trinity Episcopal School Corp. v. Romney*⁸² court followed the logic of *First National Bank* and *Chicago Homeowners* to support its refusal to enjoin construction of low income housing. The majority clarified its reasoning by dividing its discussion into two separate issues. First, it concluded, NEPA does require consideration of those tangible factors such as the incidence of crime and the quality of schools which are the basis for social attitudes of residents.⁸³ Relying on *Hanly I*,⁸⁴ the court found that NEPA clearly mandates analysis of "physical, social, cultural and aesthetic dimensions."⁸⁵ Second, the court discussed whether the social attitudes themselves must be weighed independently of the tangible factors upon which they may be based.⁸⁶ It determined that attitudes and fears unsupported by tangible facts are not cognizable under NEPA because NEPA requires a factual study.⁸⁷ The plaintiffs in *Trinity Episcopal* failed to show convincing evidence to support their fears. Consequently, the court denied their request to enjoin changes in an urban renewal plan.

D. Potential Health Hazards

Two recent district court decisions dealing specifically with potential health hazards clearly separated impacts on human health from impacts on the environment. All previous distinctions had been developed primar-

81. *Id.* at 231 (quoting *Maryland-Nat'l*, 487 F.2d at 1037).

82. 387 F. Supp. 1044 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

83. "Thus issues such as percentage of minority residents or proximity of public housing projects and the quality of community services such as the degree of crime, police protection, schools, hospitals, fire protection, recreation, transportation and commercial establishments are essential to a NEPA study." *Trinity Episcopal*, 387 F. Supp. at 1078.

84. *Hanly I*, 460 F.2d at 647:

The National Environmental Policy Act contains no exhaustive list of so-called 'environmental considerations,' but without question its aims extend beyond sewage and garbage and even beyond water and air pollution. The Act must be construed to include protection of the quality of life for city residents. Noise, traffic, overburdened mass transportation systems, crime, congestion and even availability of drugs all affect the urban 'environment' and are surely results of the 'profound influences of . . . high-density urbanization [and] industrial expansion.'

(citations omitted).

85. *Trinity Episcopal*, 387 F. Supp. at 1078.

86. *Id.* at 1078-79.

87. *Id.* at 1075. "[C]ommunity attitudes and fears, or the propensity of certain economic or racial groups to commit anti-social behavior, do not lend themselves to . . . objective analysis" *Id.* at 1078-79.

ily to narrow the parameters of NEPA, while these two decisions expanded them. *Citizens Against Toxic Sprays, Inc. v. Bergland*⁸⁸ held that an EIS prepared by the United States Forest Service on its Vegetation Management Program inadequately discussed the effects of herbicide contaminants on human and animal health.⁸⁹ The court issued an injunction to prevent the use of phenoxy herbicides by the U.S. Forest Service pending a more complete study. It stated that "no subject to be covered by an EIS can be more important than the potential effect of a federal program upon the health of human beings."⁹⁰ While the court did not require consideration of "remote and highly speculative consequences," it did indicate that any uncertain or unknown effects and any disagreement by experts on possible adverse consequences must be noted.⁹¹ The broad scope of analysis mandated by the *Bergland* decision may apply only to cases involving health hazards. The court indicated that the nature of a proposal determines the level of study necessary.⁹² The majority opinion focused on the potential health hazard presented and extended the scope and content of an EIS beyond that required in any previous case.

In *National Organization for the Reform of Marijuana Laws v. United States Department of State*,⁹³ the court required the State Department to consider the effects of the United States' participation in an aerial narcotics eradication program in Mexico. In a brief opinion, Judge Waddy emphasized that the health aspect of this case was determinative. Where a potential health hazard exists, an EIS is mandated.⁹⁴ In addition to the need to evaluate closely any adverse consequences and weigh these impacts against possible advantages, the court found a responsibility under NEPA to educate the public.⁹⁵ The existence of health hazards mandates an expansive view of NEPA.

The line of cases prior to *PANE* created various distinctions designed to limit the scope of NEPA. Secondary sociological and economic impacts were distinguished from primary impacts,⁹⁶ attempts were made to catego-

88. 428 F. Supp. 908 (D. Or. 1977).

89. *Id.* at 927.

90. *Id.* at 908-09.

91. *Id.* at 922.

92. *Id.* at 934. See *Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d 79, 93 (2d Cir. 1975).

93. 452 F. Supp. 1226 (D.D.C. 1978).

94. *Id.* at 1232.

95. See *id.* at 1234; see also *Jones v. District of Columbia Redevelopment Land Agency*, 499 F.2d 502, 512 (D.C. Cir. 1974), *cert. denied*, 423 U.S. 937 (1975).

96. See *supra* notes 41-58 and accompanying text.

size impacts as objective or subjective,⁹⁷ and certain effects were eliminated from consideration for lack of quantifiability.⁹⁸ Finally, recognizing the serious implications of allowing uncertainty where potential effects on health exist, courts began to distinguish impacts on health from impacts on the environment. This latter distinction, adopted by the *PANE* Court, became the basis for broadening the scope of NEPA to encompass potential psychological harm.

III. *PEOPLE AGAINST NUCLEAR ENERGY V. UNITED STATES NUCLEAR REGULATORY COMMISSION*: PSYCHOLOGICAL IMPACTS ARE COGNIZABLE UNDER NEPA

Following a serious accident at TMI-2, the NRC decided to delay restart of TMI-1 until it reviewed the safety of the reactor. It issued an order and notice of hearing regarding the restart of TMI-1.⁹⁹ The notice listed the issues to be considered; psychological stress was not among them. The NRC also announced the formation of a Licensing Board, charged with conducting public hearings and defining issues appropriate for consideration in the restart process. Those wishing to raise the issue of psychological stress were invited to submit briefs to the Licensing Board.¹⁰⁰ *PANE* filed two contentions and a supporting brief contending that psychological stress ought to be considered in the NRC's decision. The Licensing Board recommended consideration of psychological stress,¹⁰¹ but the NRC rejected *PANE*'s position and the Licensing Board's recommendation and excluded from its appraisal of TMI-1 alleged psychological stress.¹⁰² On petition to the United States Court of Appeals for the District of Columbia, the court held that psychological stress is cognizable under NEPA.¹⁰³

Judge Wright, in the majority opinion, relied primarily on the legislative intent and the plain language of NEPA.¹⁰⁴ He noted that the issue was

97. See *supra* notes 75-87 and accompanying text.

98. See *supra* notes 59-74 and accompanying text.

99. Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), 10 N.R.C. 141 (1979). See *supra* notes 15-23 and accompanying text.

100. Metropolitan Edison Co., 10 N.R.C. at 140.

101. Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), 11 N.R.C. 297 (1980).

102. Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), 12 N.R.C. 607 (1980). On Dec. 5, 1980, four of the five commissioners voted on that recommendation. The vote was split (2-2); consequently, the restart hearing continued without consideration of psychological stress.

103. The court issued an amended judgment on April 2, 1982, vacating an injunction issued in an interim judgment issued Jan. 7, 1982. *PANE v. NRC*, 678 F.2d 222, 226 (D.C. Cir. 1982).

104. *Id.* at 228 (citing 42 U.S.C. §§ 4321, 4331(b), 4331(c) (1976)).

one of first impression and attempted to limit the impact of the decision by shaping the holding directly to the unique situation the case presents. Until TMI, this country had never experienced a major accident at a nuclear power plant.¹⁰⁵ Judge Wright also distinguished this case from cases where courts found secondary socioeconomic impacts not cognizable under NEPA. He perceived direct harm to human health, not just secondary impacts on the environment.¹⁰⁶ The *PANE* majority cited several cases for the proposition that an EIS must be prepared where a potential effect on human health exists.¹⁰⁷ Regarding quantifiability, the court dismissed concerns over the NRC's ability to accurately measure psychological effects. If the esthetic value of trees in a national park can be considered for the purpose of an EIS,¹⁰⁸ psychological harm can also be considered. The NRC licensing board also found that, at least for the purposes of NEPA, "psychological stress is sufficiently quantifiable."¹⁰⁹ Concluding that people in the area around Three Mile Island, as well as the nation as a whole, have a right to participate where a decision could affect their psychological health, the court remanded the case to the NRC for further study. If the NRC finds new information or new circumstances pertaining to effects of TMI on psychological health, a supplemental EIS must be prepared.¹¹⁰

Judge Wilkey's dissent distinguished the cases relied on by the majority, pointing out that in these cases the federal action itself caused the impact on health.¹¹¹ The cases do not consider any instance where fear of the federal action causes an impact on health. Judge Wilkey criticized the court's decision because it will require the NRC to assess not only the risk of a proposed activity, but also "how people perceive and react to that risk."¹¹² If the NRC finds that the actual proposed activity creates no significant risk of health hazards, it must still deny the proposal because the

105. *PANE*, 678 F.2d at 228.

106. *Id.* at 229.

107. *Id.* See, e.g., *Maryland-Nat'l Capital Park & Planning Comm'n v. United States Postal Serv.*, 487 F.2d 1029, 1039-40 (D.C. Cir. 1973) (allegations that inadequate water runoff system will endanger health by causing floods; agency must consider "genuine issues as to health" before deciding whether to prepare an environmental impact statement); *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F. Supp. 908, 927 (D. Or. 1977) (no subject to be covered by an EIS can be more important than the potential effects of a federal program upon the health of human beings).

108. *PANE*, 678 F.2d at 230 n.10.

109. *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1)*, 11 N.R.C. at 301.

110. *PANE*, 678 F.2d at 235.

111. *Id.* at 238 (Wilkey, J., dissenting).

112. *Id.* at 239.

public perceives and fears a risk to health. Attacking the court's dismissal of the quantifiability problem, Judge Wilkey characterized potential psychological harm as ephemeral and speculative.¹¹³ He rejected the court's distinction between fears of secondary sociological impacts ("mere anxieties") and "medically-recognized impairment of the psychological health."¹¹⁴ The court's decision could ultimately allow any allegation of psychological stress to postpone implementation of a proposed action. Extending NEPA to this extreme, Judge Wilkey argued, would frustrate national policy by delaying the development of nuclear power.¹¹⁵

IV. ANALYSIS OF *PANE*'S IMPACTS AND IMPLICATIONS

The *PANE* decision presents a potential for significant expansion of the scope of NEPA as it was previously interpreted by courts. By tying the issue of public fears directly to health hazards instead of social and economic concerns, a court for the first time found a category of fear cognizable under NEPA. While the *PANE* majority attempts to limit the applicability of its holding, the dissent recognizes that this decision could have a significant impact on future cases. Inclusion of psychological harm caused by fear of a federal action within the definition of health may extend NEPA to the point where it becomes limitless and cannot fulfill its goals.

A. *Fulfilling NEPA's Goals: The Purpose of an EIS*

In promulgating NEPA, Congress recognized that man and his environment are inexorably linked.¹¹⁶ Any action taken that will have an impact on the environment will inevitably affect mankind. Likewise, the converse is true. In order to protect both natural resources and human productivity, Congress established a procedure to ensure that agencies would be apprised of all potential impacts on health and the environment that an ac-

113. *Id.* at 240.

114. *Id.* at 242-43.

115. *Id.* at 237-38.

116. Congress expressed a desire to "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences," 42 U.S.C. § 4331(b)(3) (1976) and insure that "man and nature can exist in productive harmony." 42 U.S.C. § 4331(a) (1976). One might compare the language of NEPA with the language chosen by the framers of the United States Constitution. The Constitution was written with an eye to the future. Just as the framers could not predict the potential changes that could occur in future generations, Congress could not outline the developments it expected NEPA to protect. Instead, it established sound policy in a manner flexible enough to adapt and encompass a myriad of potential future developments.

tion might have before making a final decision on that action.¹¹⁷ Health and potential risks to health are clearly cognizable.¹¹⁸ While no court has held that psychological harm is not a legitimate health hazard, several courts have held that mere fear of a potential health hazard is not cognizable under NEPA.¹¹⁹ The *PANE* majority admitted that fear does not necessarily have a direct impact on health. All previous cases that declined to consider the fear of residents can be distinguished from the *PANE* case because they dealt with purely socioeconomic impacts on the community. Since the courts have never recognized secondary socioeconomic impacts as being within the direct intent of NEPA, these impacts alone are not significant enough to trigger the preparation of an EIS.¹²⁰ When fear of a federal action reaches the level where it directly affects the health of the community, a new issue arises. Health, unlike socioeconomic impacts, is a direct impact cognizable under NEPA.¹²¹

Judge Wilkey expressed concern that an over-inclusive analysis would defeat the usefulness of the statute and take NEPA far beyond its intended purpose.¹²² The delay caused by the preparation of an EIS, especially where the EIS requires the agency to gain expertise outside its own field, may have a greater impact on society than the information obtained in the EIS.¹²³ He also feared that the majority decision would permit any allegation of psychological harm to delay the implementation of a critical federal

117. After a threshold determination is made by the agency involved that the pending action could significantly affect health or the environment, an EIS must be prepared. *See* 42 U.S.C. § 4332 (1976 & Supp. III 1979). *See supra* notes 6-7, 32-36 and accompanying text.

118. NEPA asserts that the federal government must, among other things, assure that its actions do not cause "risk to health or safety." 42 U.S.C. § 4331(b)(3) (1976 & Supp. III 1979). *See* National Org. for the Reform of Marijuana Laws v. United States Dep't of State, 452 F. Supp. 1226 (D.D.C. 1978); Citizens Against Toxic Sprays, Inc. v. Bergland, 428 F. Supp. 908 (D. Or. 1977).

119. Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); Nucleus of Chicago Homeowners Ass'n v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); Maryland-Nat'l Capital Park and Planning Comm'n v. United States Postal Serv., 487 F.2d 1029 (D.C. Cir. 1973); First Nat'l Bank v. Richardson, 484 F.2d 1369 (7th Cir. 1973).

120. *PANE*, 678 F.2d 222, 230 (D.C. Cir. 1982). Although socioeconomic impacts cannot trigger an EIS, they must be included as cognizable impacts when a direct impact does trigger an EIS. *See* Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor, 609 F.2d 342, 345-46 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); Image of Greater San Antonio v. Brown, 570 F.2d 517, 522-23 (5th Cir. 1978).

121. *See supra* note 118.

122. *PANE*, 678 F.2d 222, 239 (D.C. Cir. 1982) (Wilkey, J., dissenting).

123. Monarch Chem. Works, Inc. v. Exon, 466 F. Supp. 639, 640 (D. Neb. 1979). *But see* Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1118 (D.C. Cir. 1971) ("consideration of Administrative difficulties, delay, or economic cost does not strip the provision of its fundamental importance").

program.¹²⁴ While Judge Wilkey did not support uninformed decision-making, he did question the prudence of requiring the NRC to assess "how people perceive and react"¹²⁵ to the risk of a proposed action.¹²⁶

The majority maintained that its decision would promote the informational intent of the Act rather than defeat its usefulness.¹²⁷ If, in fact, the fears of the public are irrational, the preparation of an EIS could serve an important role in educating the public as well as the agency.¹²⁸ Any unprecedented proposal arouses skepticism.¹²⁹ In highly technical areas where the general public has a very limited knowledge, the fear of the unknown creates a tendency to avoid the perceived risks of a new project

124. Using Congress's decision to promote and support the advancement of nuclear energy and citing *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978), as an example, Wilkey explained his concern. Where Congress, or a duly empowered agency implementing a policy decision of Congress, makes a decision to proceed with a given program which it deems to be in the best interest of society, the uninformed and changing fancies or fear of public opinion should not override that decision. *PANE*, 678 F.2d 222, 239 (D.C. Cir. 1982).

125. *PANE*, 678 F.2d at 239 (Wilkey, J., dissenting).

126. Judge Wilkey's opinion reflects a theory postulated by the founding fathers and reflected in the structure of our democratic system of government. See *THE FEDERALIST* No. 10 (J. Madison). While public opinion and individual input into the governmental decisionmaking process is critical, the passions of the masses are easily swayed. Strong federal policy cannot be based on the changing whims of public opinion. Congress, set up as the representative body of government, theoretically collects public opinion, filters it and uses it to generate stable policy. It also prevents a vocal minority from overriding the best interests of the majority. Unlike Congress, a governmental body attempting to implement a federal policy is not making a political decision. Rather, it is taking a decision and attempting to implement it in the most effective, least offensive manner possible. A congressional decision to support and promote nuclear energy would not be defeated by a decision not to reopen TMI-1. The NRC would simply be forced to pursue an alternate course of action.

127. NEPA's informational purpose is not limited to just the agency involved in the decision. *Maryland-Nat'l Capital Park & Planning Comm'n v. United States Postal Serv.*, 487 F.2d 1029, 1041 (D.C. Cir. 1973); *Natural Resources Defense Council v. Morton*, 458 F.2d 827 (D.C. Cir. 1972); *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F. Supp. 908, 922 (D. Or. 1977).

128. See *Workshop on Psychological Stress Associated with the Proposed Restart of Three Mile Island*, Unit 1 [hereinafter cited as *Workshop*] (Proceedings prepared by the Mitre Corp., sponsored by the NRC, and held in February 1982 in McLean, VA. The workshop found that educating the public and providing access to information may ameliorate much potential psychological stress); see also *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974); *Maryland-Nat'l Capital Park and Planning Comm'n*, 487 F.2d at 1041; *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971); *Burkey v. Ellis*, 483 F. Supp. 897 (N.D. Ala. 1979); *Citizens Against Toxic Sprays, Inc.*, 428 F. Supp. at 922.

129. *Workshop*, *supra* note 128, at 12 (sophisticated technology which the general public does not comprehend can translate into fear. The unknown extent of long term effects and the frequent disagreement of experts over the safety of nuclear power create confusion and fear as well.)

even if that means accepting the limitations of an old alternative.¹³⁰ Through the preparation of an EIS, the agency has the opportunity to persuade the public of the necessity, value, and safety of the proposed activity. Education could reduce the chance that views which are "scientifically ignorant and divorced from reality" will thwart the advancement of a sound federal activity.¹³¹

Preparation of an EIS may produce another benefit as well. *Monarch Chemical* expressed concern that consideration of fears will place courts and agencies in a position of judging the legitimacy and rationality of a particular fear.¹³² An EIS, in essence, is a cost-benefit analysis. The benefits of the proposed action must outweigh the potential adverse consequences the action might have on health and the environment.¹³³ Fear and psychological stress will be evaluated with all the other impacts both beneficial and adverse. When considered in the context of the entire evaluation, the legitimacy and rationality of the fear should be more apparent. Because the EIS examines all the impacts of the proposal, no single factor will be outcome determinative. Psychological stress caused by neighborhood fears will not alone defeat a meritorious proposal.

B. Psychological Impacts Amenable to Analysis

The most frequently mentioned problems that courts find with considering psychological stress is determining when that stress rises to the level of cognizable impact and how that impact can be quantified for analysis. In *PANE*, the majority's holding is very narrow, reflecting the court's understanding of the need to distinguish mere fears from actual psychological impacts. According to the court's decision in *PANE*, NEPA applies to

130. *PANE*, 678 F.2d 222, 227 (D.C. Cir. 1982) (citing separate studies by the Hershey Medical Center, the Pennsylvania Department of Health, the Western Psychiatric Institute of the University of Pittsburgh, and Central Pennsylvania Blue Shield).

131. *PANE*, 678 F.2d at 226.

132. *Monarch Chem. Works, Inc.*, 466 F. Supp. at 655. See *Workshop*, *supra* note 128, at 15 (distinguishing between irrational (subjective, not data-based) and rational (objective, data-based) fears is often difficult and not necessarily helpful).

133. *Jones v. District of Columbia Redevelopment Land Agency*, 499 F.2d 502, 512 (D.C. Cir. 1974), *cert. denied*, 423 U.S. 937 (1975). Essentially, the EIS must balance the benefits and environmental costs of the proposed action and each reasonable alternative and then determine which course of action has the best net balance. See 42 U.S.C. § 4331 (1976 & Supp. III 1979); 40 C.F.R. § 1500.8(a)(4) (1976). See also *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 833 (D.C. Cir. 1972); *National Org. for Reform of Marijuana Laws v. United States*, 452 F. Supp. 1226, 1234 (D.D.C. 1978); *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F. Supp. 908, 934 (D. Or. 1977); *Trinity Episcopal School Corp. v. Romney*, 387 F. Supp. 1044, 1075 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

"post-traumatic anxieties, accompanied by physical effects and caused by fear of recurring catastrophe."¹³⁴ This holding leaves open for decision in future cases whether or not both physical effects and prior traumatic catastrophes are necessary to lend validity to allegations of psychological stress.¹³⁵ The dissent argues that the majority's decision opens the floodgates for a panoply of creative suits alleging harm to psychological well-being.¹³⁶ In support of its criticism, it cites four recent licensing and permit proceedings which have already raised psychological stress claims.¹³⁷

The court's requirement that a physical impact on health be shown can be traced to several prior decisions. The Seventh Circuit, in *First National Bank*, expressed its opinion that fear of harm alone would be insufficient to trigger an EIS.¹³⁸ Without clear and convincing evidence of actual psychological harm caused by that fear, no tangible impact exists. "Public sensibilities" like esthetic tastes are subjective factors unless they become manifest in physical effects. As the court in *Maryland-National* noted, esthetics play a role in every proposed action; however, unless the decisionmaker has some objective criteria by which to analyze the esthetic values involved, they are not cognizable under NEPA.¹³⁹ Likewise, fears, public sensibilities, and psychological factors are present in every situation. They too cannot be recognized as impacts until they are amenable to objective analysis.

The critical dilemma lies in deciding what clear and convincing evidence transforms a claim of psychological stress from something subjective into something objective and cognizable under NEPA. "Linguistics and etymology" will not support a claim of psychological stress.¹⁴⁰ *Trinity Episcopal* suggests, with regard to impacts on the environment, that the effects must be physical.¹⁴¹ If we extend that requirement to impacts on

134. *PANE*, 678 F.2d 222, 230 (D.C. Cir. 1982).

135. *Id.* at 248 (Wilkey, J., dissenting).

136. These suits would not be limited to NEPA but would apply to actions of all agencies. *Id.* at 239 n.17.

137. See *Cincinnati Gas & Elec. Co.*, NRC No. 50-358 (previously rejected contention raised again Mar. 4, 1982); *Carolina Power and Light Co.*, NRC Nos. 50-400, 50-401 (contentions raised Feb. 17, 1982); *Public Serv. Co. of Okla.*, NRC Nos. 50-556, 50-557 (contention raised Feb. 1, 1982); *Consolidated Edison Co. of N.Y. & Power Auth. of N.Y.*, NRC Nos. 50-247-SP, 50-286-SP (contention raised Dec. 8, 1981).

138. *First Nat'l Bank v. Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973).

139. *Maryland-Nat'l Capital Park & Planning Comm'n v. United States Postal Serv.*, 487 F.2d 1029, 1038 (D.C. Cir. 1973).

140. *Id.* at 1037.

141. *Trinity Episcopal School Corp. v. Romney*, 387 F. Supp. 1044, 1078-79 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975). See also *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976).

health, the relevant consideration appears to be whether the proposed act or action will have a physical effect on health. While psychological distaste alone will not be considered,¹⁴² when psychological response rises to the level of actual physical harm, it becomes cognizable.

As the dissent in *PANE* pointed out, the actual outward manifestations of psychological harm are often minor if they appear at all.¹⁴³ *PANE* establishes no test to determine, outside of obvious external conditions, when psychological health has been physically disturbed. Presumably, medical experts can make a determination of psychological harm on a case by case basis. The *Chicago Homeowners* court questioned social statistics as a measure of human behavior.¹⁴⁴ Medical and scientific studies have also been criticized for their inability to agree on psychological harm diagnosis. If no such determination can be reliably made, psychological stress may never be factored into an EIS.

The inability to recognize physical effects without actual outward manifestations raises the problem of quantifiability. This question of whether a physical effect can be accurately measured must be distinguished from the question of whether alleged stress is objective rather than subjective. Once psychological stress is recognized as having an objective impact, an acceptable standard of measurement must still be found.¹⁴⁵ Theoretically, psychological stress could be objective but still not amenable to analysis and, therefore, not cognizable under NEPA. The prior decisions requiring a physical effect to establish a tangible impact cognizable under NEPA dealt with situations where the impact would be on the environment, not on health.¹⁴⁶ Once again, health becomes the critical distinction. While environmental impacts are clearly recognizable if they are direct and have physical effects, impacts on health can be direct and physical but have no outward manifestations. Depending upon the sensitivity of the individual, he or she can have psychological mental harm resulting from fear of physi-

142. *Hanly II*, 471 F.2d at 833.

143. 678 F.2d at 241 (Wilkey, J., dissenting). *PANE* claimed to have evidence of such physical disorders as skin rashes, aggravated ulcers, and skeletal and muscular problems resulting from the psychological stress of the TMI-2 accident. Brief for *PANE*, *PANE v. N.R.C.*, 678 F.2d 222 (D.C. Cir. 1982).

144. *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976).

145. "Unlike factors such as noise, which can be related to decibels and units which measure duration, or crime, in which crime statistics are available, psychological factors are not readily translatable into concrete measuring rods." *Hanly II*, 471 F.2d at 833, n.10.

146. See *Image of Greater San Antonio v. Brown*, 570 F.2d at 522; *Nucleus of Chicago Homeowners Ass'n*, 524 F.2d at 231; *First Nat'l Bank*, 484 F.2d at 1371; *Trinity Episcopal*, 387 F. Supp. at 1075-83.

cal safety without generating any outward symptoms of that harm. Such effects, while objective, may not be measurable.

C. Fallback Positions of the *PANE* Court

In an attempt to identify psychological impacts that are cognizable, the *PANE* court resorts to a categorization of stress as "mere dissatisfaction" or "severe anxieties."¹⁴⁷ The dissent attacks the court's choice of language claiming that severity should only be a factor once the impact is cognizable.¹⁴⁸ The criticism stems from semantics only. In effect, the court simply reverts to the same socioeconomic classification made by previous courts.¹⁴⁹ The real distinction the court made was whether the impact on psychological health stems from a legitimate fear of one's personal safety or from a fear of a secondary socioeconomic impact.¹⁵⁰ The court's decision does, as Judge Wilkey notes, leave open a broad spectrum of potential fears and anxieties which may be cognizable under NEPA.

To limit its holding further, the *PANE* majority adds another stipulation on when psychological stress can be cognizable under NEPA. The anxieties causing the stress not only must have physical manifestations, but also must be the result of a prior traumatic event.¹⁵¹ This requirement is intended to bolster the legitimacy of the fear because it has already become a reality.¹⁵² The psychological stress resulting from the traumatic event stems from a fear that the same event will recur. Any fear of a potential accident that may have been present before TMI began operation was unsubstantiated. Now that one disaster has occurred, the *PANE* majority finds the fear to be legitimate and amenable to analysis within an EIS.

Whether future decisions in other circuits will require a prior traumatic

147. "NEPA does not encompass mere dissatisfactions arising from social opinion, economic concerns, or political agreements arising from social opinion, economic concerns, or political disagreements with agency policies." *PANE*, 678 F.2d 222, 230 (D.C. Cir. 1982) (citation omitted).

148. *Id.* at 240-41 (Wilkey, J., dissenting).

149. See *Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Image of Greater San Antonio v. Brown*, 570 F.2d 517 (5th Cir. 1978); *Maryland-Nat'l Capital Park & Planning Comm'n v. United States Postal Serv.*, 487 F.2d 1029 (D.C. Cir. 1973); *Monarch Chem. Works, Inc. v. Exon*, 466 F. Supp. 639 (D. Neb. 1979).

150. 678 F.2d 222, 228 (D.C. Cir. 1982). The example used by the dissent of a person living near a prison or high crime area suffering from a fear of physical harm illustrates that Judge Wilkey overlooked the real distinction Judge Wright had made. *Id.* at 241 (Wilkey, J., dissenting).

151. *Id.* at 230.

152. See *Monarch Chem. Works, Inc.*, 466 F. Supp. at 655. *Monarch* raised legitimacy in regard to environmental effects. An agency is not required to evaluate "remote impacts associated with an attenuated and speculative chain of events." *Id.*

event is uncertain. The requirement of a physical effect has a basis in prior law, but no court has ever discussed prior traumatic events with regard to NEPA.¹⁵³ The *PANE* court, however, needed to find a concrete basis of analysis. Because fear, anxiety, and psychological stress are by nature subjective, they present analytical problems. In making a threshold determination of whether a genuine issue of health exists, the agency decisionmaker needs a "measuring rod."¹⁵⁴ While the threshold where health issues are concerned is "relatively low," agencies cannot make "arbitrary and capricious" decisions.¹⁵⁵ A prior accident provides a basis for both credibility of the claim of stress and comparative analysis of its impact in an EIS.¹⁵⁶

Present inability to measure psychological stress accurately should not preclude it from consideration under NEPA.¹⁵⁷ Chief Judge Friendly noted early in the NEPA debates that agencies should not be allowed to make their decisions in doubtful cases without considering all relevant data.¹⁵⁸ Allowing important decisions to be made without considering certain potential impacts because those impacts present problems of quantification, contravenes the purpose of NEPA. Just as courts have found ways to measure psychological impacts for determining damages in torts or mental insanity in criminal cases, a suitable means of measuring psychological stress for evaluation under NEPA will emerge.¹⁵⁹

153. Logically, it seems to be repugnant to the purpose of NEPA to hold that the actual harm feared must be realized before the impact of that fear can be recognized. See 42 U.S.C. § 4331 (1976).

154. *Hanly II*, 471 F.2d at 833 n.10. The physical effects of psychological harm are often inward only and do not manifest themselves in symptoms an untrained observer could recognize.

155. *Maryland-Nat'l*, 487 F.2d at 1039-40. Several courts have adopted the position that Congress, in passing NEPA, intended to give the agencies involved great discretion. *E.g.*, *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 229 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); *First Nat'l Bank of Chicago v. Richardson*, 484 F.2d 1369, 1381 (7th Cir. 1973). While judicial limitations have been imposed where courts have found abuse of discretion, the court will generally defer to the good faith judgment of the agency. *Id.* at 1377.

156. In establishing a basis for analysis of psychological stress relating to restart of TMI-1, extrapolation from existing studies on TMI-2 has been suggested as one reliable tool for measurement. *Workshop*, *supra* note 128, at xxi.

157. The federal government has a duty to "identify and develop methods and procedures . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making . . ." 42 U.S.C. § 4332(2)(B) (1976). Inability to solve a problem does not mean that an EIS is unnecessary. *Maryland-Nat'l*, 487 F.2d at 1041.

158. *Hanly II*, 471 F.2d at 837-38 (Friendly, C.J., dissenting).

159. Workshop results suggest several potential methods of evaluation including analogies to other traumatic events, extrapolation from presently existing TMI studies and supplemental data for new studies. *Workshop*, *supra* note 128, at 12.

V. CONCLUSION: IMPLICATIONS FOR FUTURE NEPA DECISIONS

Though narrowly stated, the holding in *PANE* could have a broad impact on the scope of NEPA depending on how future courts interpret it. Judge Wilkey's dissent criticizes the court's holding as overly expansive. He suggests that an EIS would be triggered by any allegation of psychological stress.¹⁶⁰ In view of the majority's carefully worded holding and the precedent set in other cases, such an extended reading appears unlikely.¹⁶¹ The secondary socioeconomic distinction still remains. While several courts have discussed sociological and psychological well-being,¹⁶² no court has ever suggested that social changes could have a primary impact on health. Focusing on health as the key to the court's decision, other courts in subsequent decisions can distinguish *PANE* from most fear-related allegations. If the post-traumatic requirement remains, the *PANE* decision would have an extremely limited application. On the other hand, if courts discard *PANE*'s prerequisites and recognize psychological stress prior to the occurrence of a traumatic event, *PANE* could lay the foundation for a significant expansion of NEPA's scope.

The court's recognition of post-traumatic psychological health effects as impacts cognizable under NEPA will, if only in this instance, alter the scope of an EIS. Public input into the realm of federal decisionmaking will increase and the additional input can serve to enhance rather than impede the goals of NEPA. The threat of having a proposed action delayed by preparation of an EIS considering alleged psychological stress may prompt agencies into implementing public education programs. Concrete knowledge of the risks as well as the safeguards of a proposed federal action could substantially reduce the public's anxiety factor.¹⁶³ In addition, greater awareness of environmental concerns would be promoted. Finally, in order to educate the public, the agency proposing the implementation of any given action would be compelled to research more thoroughly and carefully each aspect of that proposal. Since the agency, as decisionmaker, retains the power to make the ultimate determination, pub-

160. 678 F.2d at 234.

161. The NRC recently issued a policy statement construing *PANE* as limited to its own facts. It interprets *PANE* as requiring three prerequisites to cognizability of psychological stress impacts under NEPA: 1) "fears of recurring *catastrophe*" at the site in question causing 2) "post-traumatic anxieties" (not just "mere dissatisfaction with agency proposals or policies") and accompanied by 3) physical effects. In addition, the NRC stressed that the use of the word "*catastrophe*" indicates that only serious accidents qualify. In its opinion, the only situation to date meeting these prerequisites is TMI-2. Policy Statement, 47 Fed. Reg. 31,762 (1982).

162. See, e.g., *Monarch Chem. Works, Inc.*, 466 F. Supp. at 657.

163. See *supra* notes 127-31 and accompanying text.

lic concern and input can only serve to make that decision more enlightened.

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